IN THE SPECIFICATION

Please amend the specification as follows:

Please amend the paragraph beginning on page 15, line 9 as follows.

FIGs. 6A - 6C illustrate the basic relationship of signal layers in a layered modulation transmission. FIG. 6A illustrates a first layer signal constellation 600 of a transmission signal showing the signal points or symbols 602. This signal constellation seen in FIG. 6B illustrates the second layer signal constellation of symbols 204 over the first layer signal constellation 200 where the layers are coherent. FIG. 6C illustrates a second signal layer 206 of a second transmission layer over the first layer constellation where the layers may be non-coherent. The second layer 606 rotates about the first layer constellation 602 due to the relative modulating frequencies of the two layers in a non-coherent transmission. Both the first and second layers rotate about the origin due to the first layer modulation frequency as described by path 608.

Please amend the paragraph beginning on page 19, line 24 as follows:

Ignoring $f_U(\cdot)$ and $f_L(\cdot)$ and noise $n(t)$, the following represents the output of the demodulator 1004 to the FEC decoder 1002 after removing the upper carrier:

$$s'_{UL}(t) = M_U \sum_{m=-\infty}^{\infty} S_{Um} p(t - mT) + M_L \exp\{j(\omega_L - \omega_U)t + \theta_L - \theta_U\} \sum_{m=-\infty}^{\infty} S_{Lm} p(t - mT + \Delta T_m)$$

Because of the magnitude of difference between M_U and M_L, the upper layer decoder 1002 disregards the M_L component of the $s'_{UL}(t)$.

Please amend the paragraph beginning on page 22, line 25 as follows:

Referring again to the enhanced tuner/modulator 904 and decoder 506 illustrated in FIG. 10A, it is noted that the decoder 506 includes an upper layer FEC decoder 1002 and a lower level decoder 1008. When the upper and lower layer signals (UL+LL) 1016 enter the IRD 802, the upper layer signal (UL) is demodulated by upper layer demodulator 1004 and decoded by the upper layer decoder 1002. To extract the lower layer (LL) signals, the upper layer (UL) symbols are then re-encoded, and the signal is remodulated by remodulator 1006. A signal processor module 1018 then alters the UL signal by introducing effects that are produced by the satellite transponder amplifier and re-normalizes the amplitude, thus creating a reconstituted, idealized UL signal. This reconstituted UL signal is subtracted from the composite UL+LL signal by subtractor 1012, yielding the LL signal. The LL signal is then decoded using a demodulator 1010 and decoder 1008, preferably optimized for the LL signal.

Please amend the paragraph beginning on page 27, line 8 as follows:

FIGs. 15A and 15B are diagrams showing illustrative process steps that can be used to practice another embodiment of the invention. FIGs. 15A and 15B are discussed in concert with FIGs. 16 and 17. FIG. 16 presents a block diagram of salient elements of a representative transmitter and receiver that can perform the operations described in FIGs. 15A and 15B. In this embodiment, the upper layer signal and the lower layer signal are separately and multiplexingly encoded, as shown in block 1502. This can be accomplished by using multiplexer 1604 to apply the upper layer signal and the lower layer signal to a single encoder such as encoder 1302 shown in FIG 16. As before, upper layer and lower layer symbols are assigned, and the upper layer, and the upper layer signal and the lower layer signal is mapped and modulated, as shown in blocks 1504 and 1506. This can be accomplished, for example, by mapper/modulators 1310 and 1312. The result is transmitted, as shown in blocks 1508 and 1510. This can be accomplished by uplink transmitters 1314 and downlink transponder 1318.